HUMAN MONOCLONAL ANTIBODIES AGAINST DENGUE VIRUSES

SUMMARY

A safe and effective vaccine against dengue is currently not available. Passive immunization with monoclonal antibodies from non-human primates or humans represents a possible alternative to vaccines for prevention of illness caused by dengue virus. Researchers at NCI's Cancer and Inflammation Program developed fully human monoclonal antibodies that bind and neutralize dengue type 1, 2, 3 and 4 viruses, as well as fragments of such antibodies and nucleic acids encoding the antibodies of the technology, and prophylactic, therapeutic and diagnostic methods employing the antibodies and nucleic acids of the invention. The National Cancer Institute's Cancer and Inflammation Program seeks parties interested in licensing or collaborative research to further co-develop fully human monoclonal antibodies as possible therapeutics and prophylactics, as well as a template for a Dengue vaccine.

REFERENCE NUMBER

E-273-2011

PRODUCT TYPE

- Diagnostics
- Therapeutics

KEYWORDS

- dengue
- hemorrhagic fever
- immunization

COLLABORATION OPPORTUNITY

This invention is available for licensing and co-development.

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DESCRIPTION OF TECHNOLOGY

Dengue viruses cause dengue outbreaks and major epidemics in most tropical and subtropical areas where Aedes albopictus and Aedes aegypti mosquitoes are abundant. Among the arthropod-borne flaviviruses, the four dengue virus serotypes, dengue type 1 virus (DENV-1), dengue type 2 virus

(DENV-2), dengue type 3 virus (DENV-3), and dengue type 4 virus (DENV-4) are most important in terms of human morbidity and geographic distribution.

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POTENTIAL COMMERCIAL APPLICATIONS

- Prophylaxis/therapy against dengue serotypes 1, 2, 3, and 4;
- Dengue diagnostics.

COMPETITIVE ADVANTAGES

- Antibodies are cross-reactive with all four serotypes of dengue;
- Antibodies are fully human.

INVENTOR(S)

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DEVELOPMENT STAGE

- Discovery (Lead Identification)

PUBLICATIONS

- Puri V et al. PMID: 23765162

PATENT STATUS

- **U.S. Filed:** US Pending Application # 14/400,642 (12 Nov. 2014)
- **Not Patented**

RELATED TECHNOLOGIES

- E-066-2003

THERAPEUTIC AREA

- Infectious Diseases